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Annual Guidance Memorandum FY'06

NOAA's Strategic Plan presents a vision for serving America in four critical areas: ecosystems, climate, weather and water, and commerce and transportation. The Plan also emphasizes six core capabilities which underpin our ability to serve our nation. It directs us to carry out NOAA's missions in ways which benefit the environment, public safety and the economy. In these ways, the Plan articulates a long-term destination for NOAA.

As we enter the FY 06 programming phase, we need to look closely at all our programs to ensure that our current path will lead us to our goals. This Guidance aims to help us accomplish this task. It builds upon our Strategic Plan and should be read in tandem with it. It sets out specific directions for consideration as we look to the future. It provides a road map by suggesting new approaches we should add to our repertoire, enablers to consider in examining alternative paths, and strategies to help discriminate among a range of possible tactics.

This Guidance also has a second purpose. Events around us continue to shape what we do, and we must maintain our readiness to address new challenges as they arise. The Future Directions set out below provide a bridge between the Strategic Plan and important new developments outside of NOAA.

Key themes which run through this Guidance include integration (at both the organizational and systems levels), partnership, and early identification of the essential support requirements implicit in our long-range plans. Scientific research, advanced technology development and operations remain the cornerstones of everything we do. Our talented work force is our most important asset.

Performance measures will clarify how each member of our NOAA team helps us to address vital national needs. You are an indispensable part of our mission to serve "every American every day."

Section 1 Context for this Guidance

A. The Importance of Sound Decisions

The quality of life of the American people is greatly affected by decisions governing human interactions with oceans and the atmosphere. These decisions are made by governments, corporations and individuals, in response to issues on spatial scales ranging from global (e.g., climate change), to regional (e.g., fisheries management), to local (e.g., response to a tornado warning).

More than ever, these decisions are difficult and controversial. The risk of poor decisions is fueled by (a) population and business expansion in highly vulnerable areas like coasts, (b) competing demands for access to marine resources, (c) technologies that modify the environment in unanticipated ways, and (d) high expectations about public health and safety, environmental quality and ecosystem health.

B. NOAA's Contribution to Sound Decision-Making

Sound decision-making by others depends on NOAA's ability to deliver the information needed for objective analysis of alternatives. NOAA's own decision-making processes must be transparent, participatory, and information-based, taking account of diverse societal values. In short, the Nation needs NOAA as an honest broker when it comes to oceanic and atmospheric issues.

NOAA has the capability to lead the way in responding to, identifying, and changing human impacts on the environment, from the headwaters of estuaries and the Great Lakes, through the coastal zone, over 3.4 million square miles of the U.S. Exclusive Economic Zone, and throughout the global oceans. NOAA has over one hundred legal mandates that give us responsibilities to promote sound decisions, and in some cases place responsibility for sound decisions squarely on our shoulders. Taken together, NOAA's mandates apply holistically because our responsibilities for upper trophic levels (fish and mammals) require integration of atmospheric-terrestrial-water conditions. NOAA has the largest cadre of scientists engaged in marine ecosystem issues of any federal Agency, with a history of more than 125 years of research. We have vast experience in conducting decision-making processes that translate scientific information and public input into public policy.

NOAA also has the capability to support life-saving decision-making in response to environmental conditions. We are the only agency with a mandate to issue adverse weather and flood warnings. Short and longer-term forecasts assist economic decision-making in weather and climate sensitive sectors such as agriculture. We have the ability to use our relationships with external partners to bring to bear the full weight of our expertise to achieve our defined programs.

Section 2 Future Directions

This section sets out specific directions to consider as we assess our current path and look to the future.

A. Take the Pulse of the Planet: *Contribute to an Integrated Global Observation System*

The President's Statement on the Earth Observation Summit establishes a primary requirement for NOAA: "…working together, our nations will develop and link observation technologies for tracking weather and climate changes in every corner of the world, which will allow us to make more informed decisions affecting our environment and economies. Our cooperation will enable us to develop the capability to predict droughts, prepare for weather emergencies, plan and protect crops, manage coastal areas and fisheries, and monitor air quality." To implement the President's directive, NOAA should partner with other Agencies and the international community to build an integrated, multi-purpose observation and data management system, taking ultimate data needs into account from the outset, and should develop a long-term data stewardship strategy. The system should take account of NOAA's mission requirements for physical, chemical and biological observations (including living marine resources).

B. Advance Toward an Ecosystem Orientation

We should enhance our current scientific and decision-making ability, in order to fulfill mandates for trust resources in a manner that satisfies the public's expectations of an honest broker. We should conduct research on ecological, social, and economic processes geared toward advancing integrated analyses of alternatives. We should develop new technologies to reduce or eliminate undesirable impacts on marine ecosystems. Finally, we should integrate application of our multiple ecosystem mandates within NOAA as well as with universities, industry, NGOs, and local, state, and federal agencies, by developing "place-based" demonstration projects.

C. Expand Climate Services

The Nation faces major climate policy challenges in the coming decade. These include decisions affecting, for example, future public health, economic and community planning, water management and energy supply. NOAA should support the Administration's Climate Change Science and Technology Programs by accelerating the delivery of science-based knowledge to policy makers and resource managers to manage the risks and opportunities of climate change. NOAA should also supply climate information on a variety of timescales for resource management decisions involving water, agriculture, fisheries and energy.

D. Improve Water Resource Information

Water managers expect fresh-water shortages in the near future, and coastal water resources are continually stressed. The consequences may be severe. The quantity and quality of water directly impacts critical decisions related to flood control, water supply, river transportation, irrigation, hydropower, recreation, and ecosystem management. Freshwater and estuary transition-zone information, beyond the current state of the art, is required to meet these challenges. We should integrate NOAA's collaborative research, data, and operations to generate products and services to help water resource managers. We should also seek domestic and international partnerships to incorporate water information into regional and global water resource strategies.

E. Facillitate Intermodal Transportation

The Nation's intermodal transportation network is the backbone of the U.S. economy. We should build on NOAA's foundation of expertise, research, and technology development to deliver the information, tools and services essential to safe, efficient and environmentally sound transport on water, land and in the air, especially at vulnerable choke points in the system. Impacts to the system affect transit time, delivery reliability, efficiency, cost of goods transported and the environment.

F. Sustain Important National NOAA Programs

NOAA should sustain and improve agency-wide services and products vital to the safety, health, and welfare of the American people. We save additional lives and property by improving the accuracy and lead time of our forecasts and warnings of environmental hazards and natural events. Population and business growth in environmentally vulnerable areas intensify the demand for products such as weather and air quality information. NOAA should sustain innovative research and development with payoffs over different time scales and should continue to infuse proven, cutting-edge science and technology into all of our operations.

G. Help the Global Community

NOAA expertise, research, capacity-building and disaster preparedness and mitigation efforts can save and improve people's lives, thus enhancing America's image and promoting geopolitical stability and homeland security. Our objective role as a scientific agency and the critical nature of our missions can enhance America's image as a country that uses its technological leadership for the global good. We should seek opportunities to further this purpose.

Section 3 Approaches

To promote acceptance of decisions made or supported by NOAA, we need to do more of the following:

A. Reinforce and End-to-End Approach Linking Research to Services

To carry out its mission effectively, NOAA must recognize the critical connections between research, operations, products and services. Our discoveries support our end products. This approach includes reviewing available technologies and our current research program, and focusing attention on those aspects that are required to accelerate our progress in the strategic directions set out above.

B. Build Public Literacy

The success of every aspect of NOAA's mission depends on public understanding of science and the environment. We should build our capacity to advance science and environmental literacy in partnership with public and private organizations.

C. Forge Strategic Alliances

The challenges facing America require integrated, cooperative solutions. No Agency can go it alone. We need to work with universities, industry, stakeholder groups and government Agencies at all levels. NOAA should provide leadership to develop and expand strategic partnerships – to ensure a coordinated approach, leverage scarce resources for investment and create business opportunities.

D. Work with Global Partners

The atmosphere and oceans transcend national boundaries, as do environmental threats and problems. NOAA should lead increased cooperation to advance mission goals which relate to international issues.

E. Enhance the Utility of NOAA Science and the Credibility of our Decision-Making Process

To enhance NOAA's role as honest broker, we should strive consistently to improve the accuracy and quality of the scientific research on which important decisions depend. We should also work to make our decision processes as fair and transparent as possible and should expand our interaction with the entire spectrum of decision-makers to ensure increased responsiveness to NOAA science.

F. Sharpen our Interdisciplinary Focus

We should expand our interdisciplinary range to place more emphasis on social sciences (notably, economics, sociology and law), in order to support complex decision-making in which competing socioeconomic interests must be weighed. We should promote stronger interaction and understanding among our physical and biological scientists and among NOAA employees of all disciplines.

Section 4 Enablers

To move in the directions set out above, NOAA must have a sound foundation in several areas, described here as "Enablers" because they underlie our ability to produce results across the board. These areas must receive attention in every aspect of our programs to ensure that our ability to deliver products and services to America is not compromised.

A. Environmental Modeling

Sound, state of the art, environmental models are the centerpiece of NOAA's operational and research enterprise. In particular, they are essential for fulfilling NOAA's assessment and prediction mission. We should build, improve upon and apply our capabilities for operational modeling and forecasting in support of all mission-critical aspects of atmospheric and hydrologic systems, estuaries, coastal and open ocean, the Great Lakes and living marine resources. This should be a coordinated, comprehensive NOAA effort.

B. Data Management

NOAA and its customers have a critical need for readily available and quality-controlled environmental data to move us in the strategic future directions set out above. To meet this need, we should develop a comprehensive, cost-effective, NOAA-wide data collection, quality control, storage and retrieval program.

C. Technology

NOAA is critically dependent upon sophisticated information technology for internal operations and external service delivery. We should move toward a comprehensive and secure NOAA enterprise IT architecture, pursuing a cost effective investment plan. Additionally, NOAA should make every effort to seek and adopt new technologies of all kinds (biotechnology, nanotechnology etc.) to yield better approaches and improved understanding of natural processes and phenomena.

D. Human Capital

NOAA's people remain our most critical asset. Their safety at work is a primary concern. We should also begin to implement a long-range human resources and education strategy stressing (1) broader interdisciplinary occupational categories in the personnel system and associated training needs (2) changing demographics of the NOAA work force and (3) the link between education and NOAA's future workforce needs.

E. Facilities

NOAA has a decentralized field structure of facilities often requiring special design and construction (e.g. laboratories or docks). NOAA should begin to implement a long-range strategy that addresses our need for the safe, well maintained and secure facilities that our employees deserve.

F. Platforms

Ten-year requirements plans for ships and aircraft should be carefully synchronized with the long-range needs of NOAA programs and should take account of new technology to make data collection more efficient and less costly.

G. Administrative Services

To ensure efficiency and accountability, NOAA should adopt best practices across the full range of our administrative functions.

Section 5 General Strategies

NOAA should institute processes to optimize our current program. Given the current budget climate, we should focus more sharply on integrating our efforts to achieve efficiencies, on redirecting current assets and on building strategic alliances to leverage external resources. Among alternatives, we should emphasize those which provide the greatest or most certain return on investment. We should focus on those geographical areas where risk is highest or severity of a problem is greatest. NOAA strategies should also take account of: degree to which sound decision-making depends upon the proposed activity, economic importance of resource being studied or managed, urgency of problem or need, clarity of NOAA's mandate in relation to the issue at hand, quality of NOAA's resources and expertise to address the problem, indispensability of NOAA's involvement, potential for alliance-building both within the Department of Commerce and externally, and visibility of the issue.

Section 6

Achievements and Outlooks

In recent months, we have put in place a number of important reforms, including goal teams and councils aligned to Strategic Plan goals and cross-cut priorities, a program structure based upon fiscal resources, and matrix management policies and procedures. The power of these changes was evident to me in the analytical team work on which my guidance is based. As background for this Memorandum, each of the four NOAA Goal Teams produced papers identifying urgent national needs in their mission areas, relevant NOAA capabilities, and criteria for setting program priorities. I congratulate them for adopting an unprecedented, high-level, corporate perspective during their deliberations.

NOAA Goal Teams and Councils should support Program Managers to help ensure that our future directions and approaches, cross-cutting priorities and long-range support requirements are factored into programming decisions.

NOAA must continue to evolve to serve the rapidly changing world of which we are part. I have asked that the Strategic Plan be revisited to identify any necessary updates in light of this guidance and its analytical underpinnings.

With this guidance and our new management principles, the NOAA team can serve America with distinction as we face the challenges of the 21st century.

This message was generated for the Under Secretary of Commerce for Oceans and Atmosphere by the NOAA Information Technology Center/Financial and Administrative Computing Division